Bilateral Hernias in the Female

SUMMARY—An experience with 216 bilateral hernias in female patients is reviewed. The condition is rare, occurring only once in every 250 patients admitted for a hernia repair. Bilateral primary indirect inguinal hernias were the most frequent type. Bilateral primary femoral hernias were quite rare while bilateral primary direct inguinal hernias were even more uncommon. Other rare bilateral combinations are briefly described. The incidence in children is given.

Etiological factors are discussed, emphasizing the strong posterior wall of the inguinal canal in females.

Two per cent of patients developed a recurrent hernia; one per cent of hernias recurred. No recurrence following a bilateral primary indirect inguinal hernia repair and no "femoral" recurrence following inguinal repair were recorded.

Despite a thorough search of the literature, no comprehensive article or information on bilateral hernias in the female was found. I therefore reviewed the experience obtained at the Shouldice Hospital, Toronto, from January 1, 1946 to January 1, 1968. This condition was rare. Of approximately 50,000 patients who have undergone operation at this hospital for repair of inguinal and femoral hernia in the 22-year period, 2200 (4%) were females; of these, 216 (10%) had bilateral hernias; i.e., the condition occurred once in every 250 patients admitted for repair of hernia.

Of these 216 patients, 177 underwent a bilateral repair during a single hospital admission and 38 former patients, who had undergone unilateral hernia repair here previously, returned for repair of contralateral hernia. Of the entire group, 17 were admitted with unilateral recurrent and five with bilateral recurrent hernias; 174 underwent operation for repair of bilateral inguinal hernias, 19 for bilateral femoral hernias and 23 for bilateral combinations of the two.

The surgical management of these cases, including the technique used, has been described elsewhere.[1-4] Regional infiltration anesthesia preceded by adequate preoperative sedation was utilized in the great majority. In adults the two repairs were routinely staged 48 hours apart. Immediate postoperative ambulation was practised. The usual hospital stay for unilateral herniorrhaphy was three days and for bilateral staged herniorrhaphy five days. A comprehensive follow-up, covering not less than 10 years was in operation for each patient.

In Tables I, II and III, details of these bilateral hernias are recorded.

Bilateral primary indirect inguinal hernia was the most common condition, accounting for 142 (66%) of all patients. The age distribution of these patients is shown in Table IV.

Bilateral primary direct inguinal hernia was very rare, occurring in only four cases. An earlier investigation had shown that unilateral primary direct inguinal hernia in a female patient was also uncommon.[5] All four patients were over 50 years of age. This knowledge may help a surgeon when the accuracy of the clinical diagnosis of inguinal or femoral hernia is in question. The risk of a recurrent hernia resulting from extensive negative inguinal exploration may be comparable to the risk of overlooking a hernia in such an instance.

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The Association of Inguinal and Femoral Hernia

The association of primary direct inguinal hernia on one side and a primary femoral hernia on the other occurred only once. Likewise the combination of these two hernial types on the same side in a patient with bilateral primary hernias was uncommon, being encountered only twice. A previous study at this hospital of femoral hernia in female patients revealed that in 288 patients admitted with unilateral femoral hernia a coincidental ipsilateral primary direct inguinal hernia occurred only twice.[6] These observations suggest that the strong posterior wall of the inguinal canal in the female acts as a firm barrier, so that weaknesses in this area are most likely to result in bilateral indirect inguinal or bilateral femoral hernias. In the majority of female patients it seems unnecessary, in the absence of clinical evidence of inguinal hernia, to disturb the posterior wall of the inguinal canal during the repair of a femoral hernia if another approach can give comparable results. These arguments do not hold true for repair of femoral hernia in male patients because in males an associated direct inguinal hernia occurs frequently. Likewise repair of recurrent femoral hernia in both sexes is often more complicated.

In Tables II and III a total of 13 recurrent femoral hernias are recorded following an initial repair elsewhere. Unfortunately no records were available to ascertain the true nature of the original hernia.

Risk of Developing Contralateral Hernia

There were 70 patients who underwent repair of bilateral primary inguinal hernias at a single hospital admission in whom the interval separating the clinical appearance of each hernia was more than a year. There were also 25 such patients who underwent the repairs at two separate admissions,

making a total of 95. During the period approximately 1500 female patients underwent operation for primary unilateral inguinal hernia, and therefore the risk of such a patient's developing a similar hernia on the second side was about 1 in 16. The risk of a female patient with a unilateral femoral hernia developing a contralateral hernia was about 1 in 35.

Bilateral Hernias in Children[7, 8]

Table V shows the incidence of bilateral hernias occurring in 805 children who underwent operation at this hospital for repair of hernia between January 1, 1946 and October 1, 1964, a 19-year period.

Bilateral primary direct inguinal and bilateral primary femoral hernias were not encountered. Both types are very rare in children.

Recurrences

In this series of 216 female patients, 17 had a unilateral recurrence and five had bilateral recurrences when admitted. These 27 recurrent hernias included: indirect inguinal, six; direct inguinal, six; direct inguinal with femoral, two; and femoral, 13. Unfortunately the original operation records were not available. Since primary inguinal

TABLE I.—Patients admitted with bilateral primary hernias (193 cases)

Bilateral hernia types	*Repairs during single hospital admission*	*Repairs during two separate hospital admissions*	*Total*	*Clinical history*		
				Hernias occurred simultaneously	*Hernias occurred separately*	*Time of appearance unknown*
Both sides solitary		*No. of patients*				
Indirect, indirect	121	21	142	43	85	14
Femoral, femoral	14	2	16	2	12	2
Indirect, direct	7	2	9	2	6	1
Indirect, femoral	5	0	5	2	3	0
Direct, direct	4	0	4	1	3	0
Direct, femoral	1	0	1	0	0	1
One side multiple						
Indirect and direct, direct	4	0	4	1	2	1
Indirect and direct, indirect	3	1	4	1	2	1
Indirect and femoral, indirect	2	0	2	1	1	0
Indirect and femoral, femoral	1	0	1	0	1	0
Direct and femoral, indirect	0	1	1	0	1	0
Both sides multiple						
Indirect and direct, indirect and femoral	2	0	2	0	2	0
Indirect and direct, direct and femoral	1	0	1	0	1	0
Indirect and femoral, indirect and femoral	1	0	1	0	0	1
	166	27	193	53	119	21

TABLE II.—Patients admitted with one side primary, one side recurrent (17 cases)

Bilateral hernia types	*Repairs during single hospital admission*	*Repairs during two separate hospital admissions*	*Total*
Both sides solitary	*Number of patients*		
Recurrent indirect, indirect	2	2	4
Recurrent direct, indirect	2	2	4
Recurrent indirect, direct	1	0	1
Recurrent femoral, indirect	1	1	2
Recurrent femoral, direct	0	1	1
Recurrent femoral, femoral	1	1	2
One side multiple			
Recurrent femoral, indirect and direct	1	2	3
	8	9	17

TABLE III.—Patients admitted with bilateral recurrent hernias (5 cases)

Bilateral hernia types	*Repairs during single hospital admission*	*Repairs during two separate hospital admissions*	*Total*
Both sides solitary	*Number of patients*		
Recurrent direct, recurrent direct	1	0	1
Recurrent femoral, recurrent femoral	1	0	1
Recurrent femoral, recurrent indirect	0	1	1
One side multiple			
Recurrent femoral, recurrent femoral and direct	1	1	2
	3	2	5

TABLE IV.—Age distribution of patients with bilateral indirect inguinal hernias

Age	*0-10 yrs.*	*11-20*	*21-30*	*31-40*	*41-50*	*51-60*	*61-70*	*71-80*
Number	13	10	11	23	39	17	21	8

TABLE V.—Incidence of bilateral hernias in 805 children

Children with indirect inguinal hernias	*Male* 733		*Female* 72		*Total* 805	
Bilateral on admission	59	7.3%	11	15.3%	70	8.7%
Contralateral hernia developed subsequently	62	7.7%	6	8.3%	68	8.4%
Total bilateral incidence	121	15%	17	23.6%	138	17.1%

hernia in the female is three times as frequent as primary femoral hernia, this distribution indicates either a higher recurrence rate following primary bilateral femoral repair or the appearance of femoral "recurrence" following inguinal repair, or a combination of both.

Four of these 216 patients developed a recurrent hernia after operation in this hospital. In three a femoral recurrence followed repair of a femoral hernia and in one an inguinal recurrence followed repair of an inguinal hernia.

CASE 1.—Patient, aged 62, underwent bilateral repair in 1956 for right strangulated primary femoral hernia and left primary direct inguinal hernia. A right recurrent femoral hernia developed in 1962. No further operation has been performed.

CASE 2.—Patient, aged 47, underwent bilateral repair in 1965 for primary femoral hernias. A right recurrent femoral hernia developed six months later. A further repair was performed in 1968.

CASE 3.—Patient, aged 44, underwent bilateral repair in 1966 for right twice-recurrent femoral hernia and left combined primary indirect and direct inguinal hernia. A right (three times) recurrent femoral hernia developed six months later. A further (fourth) repair was performed in 1967.

CASE 4.—Patient, aged 67, underwent first operation in 1954 for right three-times recurrent femoral hernia and a second operation in 1959 for left primary combined indirect and direct inguinal hernia. A left recurrent inguinal hernia developed six months later. A further repair was performed in 1967.

RÉSUMÉ

Hernies bilatérales chez la femme

Nous donnons ici les faits saillants de 216 cas de hernies bilatérales chez la femme. Cette pathologie est rare, puisqu'elle n'a été découverte qu'une seule fois par 250 patientes qui ont été hospitalisées pour herniorraphie. La forme la plus fréquente a été la hernie inguinale indirecte primaire et bilatérale. La hernie fémorale primaire bilatérale a été observée très rarement et la hernie inguinale directe primaire et bilatérale a été plus rare encore. Nous décrivons brièvement d'autres associations bilatérales. Nous indiquons également la fréquence chez l'enfant.

L'article expose les facteurs étiologiques et souligne la résistance de la paroi postérieure du canal inguinal chez la femme.

Il y eut récidive herniaire chez 2% des malades. Dans 1% des cas, il y eut récidive de la hernie. On n'a signalé aucun cas de récidive après herniorraphie pour hernie inguinale indirecte primaire bilatérale ni de récidive "fémorale" après réparation inguinale.

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